

WHAT IS CLAIMED IS:

1. A method for enhancing the frequency for producing transgenic plants by *Agrobacterium*-mediated transformation which comprises incubating plant cells with *Agrobacterium* under conditions in which the protein level or activity of ABI5, ABI5 homolog or ABI ortholog in the plant cells is downregulated to produce *Agrobacterium*-mediated transformed plant cells and regenerating transgenic plants from the transformed plant cells, wherein the downregulation of the protein level or activity of ABI5, ABI5 homolog or ABI5 ortholog results in an enhanced frequency of transgenic plant production.
2. The method of claim 1, wherein the plant cells are obtained from a transgenic plant having a downregulated protein level or activity of ABI5, ABI5 homolog or ABI5 ortholog to provide the downregulation condition.
3. The method of claim 2, wherein the downregulation is under control of a gene cassette for the activation and removal of a nucleic acid sequence in a transgenic plant, wherein said nucleic acid sequence downregulates said protein level or activity.
4. The method of claim 2, wherein the transgenic plant comprises a T-DNA insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
5. The method of claim 2, wherein the transgenic plant comprises a transposon insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
6. The method of claim 2, wherein the transgenic plant comprises an interfering RNA to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
7. The method of claim 2, wherein the transgenic plant comprises an overexpressed negative regulator of ABI5, ABI5 homolog or ABI ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.

8. The method of claim 2, wherein the transgenic plant comprises a downregulated protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
9. The method of claim 8, wherein the transgenic plant comprises a T-DNA insertion in the modulating protein to downregulate the modulating protein.
10. The method of claim 8, wherein the transgenic plant comprises a transposon insertion in the modulating protein to downregulate the modulating protein.
11. The method of claim 8, wherein the transgenic plant comprises an interfering RNA to downregulate the modulating protein.
12. The method of claim 8, wherein the transgenic plant comprises an overexpressed negative regulator of the modulating protein to downregulate the modulating protein.
13. The method of claim 8, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.
14. The method of claim 1, wherein the plant cells are incubated with a plant vector which comprises a DNA sequence which downregulates ABI5, ABI5 homolog or ABI5 ortholog to produce the downregulated condition.
15. The method of claim 14, wherein the DNA sequence is located in a gene cassette for the activation and removal of the DNA sequence in a transgenic plant.
16. The method of claim 14, wherein the DNA sequence comprises ABI5, ABI5 homolog or ABI5 ortholog lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the endogenous wild type ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.

17. The method of claim 14, wherein the DNA sequence produces a hairpin RNA sequence homologous to ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
18. The method of claim 14, wherein the DNA sequence downregulates a protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
19. The method of claim 18, wherein the DNA sequence comprises the modulating protein lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the protein modulator to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
20. The method of claim 18, wherein the DNA sequence produces a hairpin RNA sequence homologous to the modulating protein to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
21. The method of claim 18, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.
22. A method for enhancing the frequency for regenerating transgenic plants which comprises transforming plant cells to produce transformed plant cells and regenerating transformed plant cells, wherein the protein level or activity of ABI5, ABI5 homolog or ABI ortholog in the plant cells is downregulated to wherein the downregulation of the protein level or activity of ABI5, ABI5 homolog or ABI5 ortholog results in an enhanced frequency of regenerated transgenic plants.
23. The method of claim 22, wherein the plant cells are obtained from a transgenic plant having a downregulated protein level or activity of ABI5, ABI5 homolog or ABI5 ortholog to provide the downregulation condition.

24. The method of claim 22, wherein the downregulation is under control of a gene cassette for the activation and removal of a nucleic acid sequence in transgenic plant, wherein said nucleic acid sequence downregulates said protein level or activity.
25. The method of claim 23, wherein the transgenic plant comprises a T-DNA insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
26. The method of claim 23, wherein the transgenic plant comprises a transposon insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
27. The method of claim 23, wherein the transgenic plant comprises an interfering RNA to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
28. The method of claim 23, wherein the transgenic plant comprises an overexpressed negative regulator of ABI5, ABI5 homolog or ABI ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
29. The method of claim 23, wherein the transgenic plant comprises a downregulated protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
30. The method of claim 29, wherein the transgenic plant comprises a T-DNA insertion in the modulating protein to downregulate the modulating protein.
31. The method of claim 29, wherein the transgenic plant comprises a transposon insertion in the modulating protein to downregulate the modulating protein.
32. The method of claim 29, wherein the transgenic plant comprises an interfering RNA to downregulate the modulating protein.

33. The method of claim 29, wherein the transgenic plant comprises an overexpressed negative regulator of the modulating protein to downregulate the modulating protein.
34. The method of claim 29, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.
35. The method of claim 22, wherein the plant cells are incubated with a plant vector which comprises a DNA sequence which downregulates ABI5, ABI5 homolog or ABI5 ortholog to produce the downregulated condition.
36. The method of claim 35, wherein the DNA sequence is located in a gene cassette for the activation and removal of the DNA sequence in a transgenic plant.
37. The method of claim 35, wherein the DNA sequence comprises ABI5, ABI5 homolog or ABI5 ortholog lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the endogenous wild type ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
38. The method of claim 35, wherein the DNA sequence produces a hairpin RNA sequence homologous to ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
39. The method of claim 35, wherein the DNA sequence downregulates a protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
40. The method of claim 39, wherein the DNA sequence comprises the modulating protein lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the protein modulator to downregulate ABI5, ABI5 homolog or ABI5 ortholog.

41. The method of claim 39, wherein the DNA sequence produces a hairpin RNA sequence homologous to the modulating protein to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
42. The method of claim 39, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.
43. A transgenic plant comprising a downregulated protein level or activity of ABI5, ABI5 homolog or ABI5 ortholog
44. The transgenic plant of claim 43, wherein the downregulation is under control of a gene cassette for the activation and removal of a nucleic acid sequence in a transgenic plant, wherein said nucleic acid sequence downregulates said protein level or activity.
45. The transgenic plant of claim 43 which comprises a T-DNA insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
46. The transgenic plant of claim 43 which comprises a transposon insertion in an ABI5, ABI5 homolog or ABI5 ortholog gene to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
47. The transgenic plant of claim 43 which comprises an interfering RNA to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
48. The transgenic plant of claim 43 which comprises an overexpressed negative regulator of ABI5, ABI5 homolog or ABI ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.
49. The transgenic plant of claim 43 which comprises a downregulated protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.

50. The transgenic plant of claim 49 which comprises a T-DNA insertion in the modulating protein to downregulate the modulating protein.
51. The transgenic plant of claim 49 which comprises a transposon insertion in the modulating protein to downregulate the modulating protein.
52. The transgenic plant of claim 49 which comprises an interfering RNA to downregulate the modulating protein.
53. The transgenic plant of claim 49 which comprises an overexpressed negative regulator of the modulating protein to downregulate the modulating protein.
54. The transgenic plant of claim 49, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.
55. A plant vector which comprises a DNA sequence which downregulates ABI5, ABI5 homolog or ABI5 ortholog in a host target plant cell.
56. The plant vector of claim 55, wherein the DNA sequence is located in a gene cassette for the activation and removal of the DNA sequence in a transgenic plant.
57. The plant vector of claim 55, wherein the DNA sequence comprises ABI5, ABI5 homolog or ABI5 ortholog lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the endogenous wild type ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
58. The plant vector of claim 55, wherein the DNA sequence produces a hairpin RNA sequence homologous to ABI5, ABI5 homolog or ABI5 ortholog to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
59. The plant vector of claim 55, wherein the DNA sequence downregulates a protein level or activity of a protein that modulates expression of ABI5, ABI5 homolog or ABI5 ortholog to downregulate the ABI5, ABI5 homolog or ABI5 ortholog.

60. The plant vector of claim 59, wherein the DNA sequence comprises the modulating protein lacking an activation domain such that inactive heterodimers are formed between the DNA sequence and the protein modulator to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
61. The plant vector of claim 59, wherein the DNA sequence produces a hairpin RNA sequence homologous to the modulating protein to downregulate ABI5, ABI5 homolog or ABI5 ortholog.
62. The plant vector of claim 59, wherein the modulating protein is ABI3, ABI3 homolog or ABI3 ortholog.